

INSECTS COLLECTED IN THE NORTH-WESTERN REGION
OF SOUTH AUSTRALIA PROPER BY H. BASEDOW; WITH
DESCRIPTIONS OF NEW SPECIES OF MANTIDÆ AND
PHASMIDÆ.—No. 2.

By J. G. O. TEPPER, F.L.S., F.S.Sc., ETC.

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The insects were collected incidentally during the progress of an expedition fitted out to examine the mineralogical, geological, and economic conditions of this hitherto little visited part of the State, and was engaged in that work from March to November, 1903. The Coleoptera were principally identified by the Rev. Thomas Blackburn, and the Lepidoptera by Mr. O. Lower, the author being responsible for the remainder. The collector, not having much time or adequate facilities at disposal, accounts for the comparative meagreness and not quite satisfactory state of the specimens in some cases. The latter, however, were often supplemented by such obtained previously from neighbouring regions. As it is, the collection, as the first made there, is of some importance in respect of geographical distribution, filling up a considerable gap, and has been deposited by the collector in the South Australian Public Museum.

The present list only comprises the Orthoptera, with supplementary descriptions of new species, in addition to previously published ones, and accounts for the greater part of the collection, as shown by the appended synopsis. The rest of the collection embraces the following identified species:—Hymenoptera—*Chrysis*, sp., *Camponotus testaceipes* (Smith), *Iridomyrmex glaber* (Sm.), *Bothroponera piliventris* (Sm.), *Myrmecia sanguinea* (Sauss), *Mutilla rugicollis* (Sauss), *Eumenes bicincta* (Sauss), *Megachyle Blackburni* (Frogg.), *Saropoda bambiformis* (Sm.). Odonata—*Hemianax papuensis* (Burm.), and *Lestes*, sp. The remainder of these contain species not previously represented in the Museum.

GENERAL SYNOPSIS.

Coleoptera	57	genera,	87	species,	211	specimens
Lepidoptera	...	31	„	39	„	108	„	„
Hymenoptera	...	13	„	20	„	31	„	„
Orthoptera	...	27	„	37	„	67	„	„
Odonata and Neuroptera	6	„	6	„	11	„
Hemiptera	...	7	„	15	„	21	„	„
Diptera	...	2	„	2	„	2	„	„
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		143	„	206	„	451	„	„

ORTHOPTERA.

BLATTARIÆ.

Epilampra aspera, Tepper.

Epilampra notabilis (Walk.), Tepper.

Periplaneta basedowi, Tepper.

Pseudepilampra punctata, Tepper, Musgrave Ranges.

Oniscosoma castanea, Brunner.

MANTIDÆ.

Orthodera marginata, Saussure.

Orthodera prasina, Saussure. (Also an egg-case.)

Pseudomantis pulchellus, Tepper.

***Fischeria quinquelobata*, spec. nov.**

Male and female. Resembling *Archimantis latistylus*, Brunner, in general aspect. Greyish-brown. Head much compressed. Eyes large, prominent. Antennæ very slender. Tips of mandibles black. Pronotum oval, minutely tuberculate, margins minutely spinulate, spines alternately black and pale. Meso- and metanotum glabrous, unarmed. Forelegs stout, *coxæ with the strong, external ridge provided with four large lobes and one small one, mucronate, and black underneath*; internal ridge minutely serrate. Fore femora with four spines preceding a fifth much longer one externally; internal ridge with numerous sub-equal spines. Middle and hind legs slender, latter long, unarmed. Tegmina much longer and wider than the wings, greyish; veins dark brown; two black, sub-rotundate spots at and before middle respectively; anal area pale. Wings about half the size of the former; all veins and veinlets of the costal area dark brown (similar to tegmina). Cerci broadly oar-shaped, apex sub-obtuse.

Length of body, 92-107 mm.; width, 5-9 mm.

Length of head, 2-3 mm.; width, 9-10 mm.

Length of pronotum (base), 7-8 mm.; width, 4-5 mm.

Length of mesonotum (max.), 32-37 mm.; width, 4-6 mm.

Length of metanotum, 5-7 mm.; width, 5-7 mm.

Length of abdomen, 45-52 mm.; width, 6-9 mm.

Length of ant. coxæ, 16-20 mm.

Length of ant. femora, 20-25 mm.

Length of ant. tibiæ, 8-10 mm.

Length of ant. tarsi, 10-13 mm.

Length of med. femora, 20-23 mm.

Length of med. tibiæ, 20-24 mm.

Length of med. tarsi, 12-14 mm.

Length of post. femora, 25-32 mm.

Length of post. tibiæ, 32-38 mm.

Length of post. tarsi, 12-14 mm.

Length of cerci, 9-10 mm.

Length of tegmina, 24-34 mm.

Length of wings, 13-20 mm.

Length of antennæ, 16-20 mm.

The male is similar to the female, only smaller. Besides the specimens from the North-West, there are three others in the Museum collection, viz.:—One, since 1887, from Yactoo, Far North (M. Crawford): another from Broken Hill, in 1890 (F. J. Burgess): and a third from Central Australia (R. Helms): and are comprised in the above measurements and description.

PHASMIDÆ.

Lonchodes caurus, *spec. nov.*

Male. Brownish-grey, glabrous, with more or less distinct black, or blackish, median line or markings dorsally from transverse carina at back of head to fifth abdominal segment. Head a little longer than pronotum, tumid behind antennæ, with a raised flat spot in place of the obsolete central ocellus, and two short divergent ridges lateral thereof. Eyes elliptical, small, scarcely prominent. Antennæ grey, triquetrous (terminal portion wanting). Pronotum rotundately arched above, median line slightly, lateral carina more deeply impressed, transverse carina a little anterior to middle, hind margin narrowly black. Mesonotum slightly wider than head, sides parallel throughout, median line raised, dorsum along the middle with numerous blackish, irregularly scattered dots: lateral carina rather broad, extending for three-fourths of length, brown, externally to same a blackish line extending to hind margin, and forming the crest of a low, broad ridge. Metanotum of same width, or only slightly wider, as the preceding, and of similar structure, but darker brown, and the aggregated dots forming a broad dark median stripe. Abdomen with segments, 1 to 3 subequal and of same width as thorax, 4 to 6 somewhat narrower, and much longer, tapering, next three still more slender, short (two subequal, the third scarcely more than half the length of the preceding), last joint with supra-anal lamina very short, latter with closely adpressed edges, forming a ridge, subacute, and longer than preceding segment. Subgenital lamina boat-shaped, last joint finely rugose, apex ovate, whitish. Cerci very short, concealed. Legs comparatively short and weak, unarmed, scabrous, grey.

Length of body, 70 mm.; width do., 1.5-3 mm.
 Length of head, 4.5 mm.
 Length of pronotum, 3.5 mm.
 Length of mesonotum, 17 mm.
 Length of metanotum, 11 mm.
 Length of abdomen, 35 mm.
 Length of ant. femora, 17 mm.
 Length of ant. tibiæ, 16 mm.
 Length of med. femora, 14 mm.
 Length of med. tibiæ, 16 mm.
 Length of post. femora, 20 mm.
 Length of post. tibiæ, 16 mm.
 Length of tarsi, 3.5 mm.

This species appears to approximate in general form to *Lonchodes Confucius*, Westwood, in general form, but differs from it in being much smaller and differently coloured, while also disagreeing in most of the minute characters. The specimen is fairly perfect, excepting the antennæ, of which only some 12 or 13 of the basal joints are preserved.

Cyphocrania cornuta, *spec. nov.*

Female. Body hoary grey to whitish, or brownish, where discoloured. Head with two thick, acuminate, rugose horns, almost vertical, and subparallel, and with several rows of tubercles. Tegmina small, with brown veins and veinlets. Wings perfect, but too small for flight; costal area with base pale, and adjoining a large black spot, remainder with ill-defined pale and dark bars and blotches; membranous portion deep black, with about five narrow, more or less irregular and disrupted transverse pale bars and some small isolated spots near the external margin. Pronotum tuberculate, furrowed, and ridged. Anterior femora stout, acutely triquetrous, the superior ridge with *four subequal, broad, forward-directed serrations*, terminating in acute spinelets. Mesonotum finely tuberculate in front and behind, with some scattered spinelets (two larger than the rest), on the disc. Median femora with eight spinelets along inferior internal ridge, and one near the middle of the external; internal ridge of median tibiæ with three triangular spines, and one on the external near the joint, besides the terminal spurs. Hind femora with larger spines along the central line beneath, five small spines along the inner lower ridge, and four minute ones on the external. Abdomen stout, cylindrical to fifth segment, but gradually contracted beyond. Posterior margin of fourth segment *with four short ridges*, the outer ones convergent, and the margin between them extended into a *foliate quadrilateral appendage*

with rugose edges, and double mid-rib, 4 mm. long. Subgenital lamina much exceeding the next two segments in length (24 mm.), apex broad, subemarginate. Cerci very short, scarcely exceeding anal segment. Under side of abdomen with a double row of tubercles to sixth segment, 6 to 8 on each segment.

Length of body, 172 mm.

Length of head, 10 mm. : width, 7 mm.

Length of pronotum, 8 mm. : width, 6.5 mm.

Length of mesonotum, 38 mm. : width, 6.5 mm.

Length of metanotum, 15 mm. : width, 8 mm.

Length of abdomen, 103 mm. : width, 9 mm.

Length of tegmina, 22 mm. : width, 6 mm.

Length of wings, 47 mm. : width, 47 mm.

Length of ant. femora, 34 mm.

Length of ant. tibiæ, 33 mm.

Length of ant. tarsi, 11 mm.

Length of med. femora, 27 mm.

Length of med. tibiæ, 30 mm.

Length of med. tarsi, 8 mm.

Length of post. femora, 46 mm.

Length of post. tibiæ, 42 mm.

Length of post. tarsi, 10 mm.

Length of antennæ, 35 mm.

The described female is the only specimen in the S.A. Museum collection which possesses both the conspicuous cephalic and the dorsal abdominal appendages denoted, nor have I come across figures or descriptions indicating these in the form mentioned—besides other distinctions. There are, however, one or two other Central Australian species represented, which exhibit similar form and wing structure of the females. There is also in the collection a male with prominent cephalic horns, which may belong to the same species as the described female, although the horns differ in form, being very divergent and compressed laterally. There are also several other males with small tubercular spines on the head, but these appear to belong to the hornless females referred to above. The colour pattern of their ample wings is quite different from that of the described form, but the detailed descriptions, etc., have to be postponed for the present.

Acrophylla nubilosa, *spec. nov.*

Male. Pale brown; body very slender. Head glabrous: flat, with indistinct, whitish dots and lines above. Occiput with two median depressions, and curved impressed furrows on each side. Ocelli obsolete. Antennæ densely hirsute. Pronotum much shorter and narrower than

the head, with some longitudinal furrows, terminated by a transverse carina near hind margin. Mesonotum cylindrical, gradually tapering to near base of elytra, then rapidly expanding to more than double between median legs, thickly beset with many small interspersed and some large spines. Metanotum stout, glabrous, with three pairs of short, oblique, white streaks underneath. Legs very long and slender, all ridges with small, distant spinelets, except those of the anterior tibiæ and of the tarsi. Tegmina short and narrow, costa and a short, oblique, discal streak whitish, remainder brown. Wings long and rather narrow; costa with some small dark spots from near middle to apex; veins and veinlets from pale to dark brown, some of the former interruptedly black towards margin; veinlets bordered with blackish-brown; outer margin broadly suffused with dull blackish, likewise the costal part of the membranous disc, with irregular blotches, the dark markings separated by translucent areas. Abdomen very slender throughout; sexual organs, including respective joint and lamina, also anal joints, very short and tumid. Cerci broad, ovate, subacute, nearly as long as the preceding three joints together.

Total length of body, exclusive of cerci, 86 mm.

Length of head, 5 mm.: width, 3 mm. (behind eyes).

Length of pronotum, 3 mm.; width, 2.3 mm.

Length of mesonotum, 15 mm.; width, 1.5-4 mm.

Length of metanotum, 13 mm.; width, 4 mm.

Length of abdomen, 50 mm.; width, 1.5-2.5 mm.

Length of ant. pedes, 61 mm.

Length of med. pedes, 44 mm.

Length of post. pedes, 62 mm.

Length of tegmina, 10 mm.; width, 4 mm.

Length of wings, 52 mm.; width, 22 mm.

Length of cerci, 8 mm.

The species is comparable with *Acrophylla tesselata*, G.R.G., from N. Australia (Westwood, Cat. Phasm. B.M., Plate xxxv., fig. 1), but is larger, and differs in the paucity of the spinulation of the legs, colouration of the wings, etc. There are a pair of similar insects in the collection from Central Australia, but appear to differ in proportions.

Acrophylla paula, spec. nov.

Male. Brown; in general aspect resembling the preceding, except size and wing form, in which it approximates *tesselata*, Westwood. Head flat, occiput, with anterior median depression (obsolete ocellus) much larger and deeper than in preceding, and other markings different. Antennæ long, slender, 16 (?) jointed, minutely hairy. Pronotum with

transverse furrow in the middle. Mesonotum and metanotum similar to preceding; also abdomen. Tegmina reddish-brown, costa not whitish, but a whitish, oblique streak indicated; apex rounded. Wings rather short, obtusely rounded; costal area reddish-brown, with indistinct dark markings along the costal margin: membranous area almost colourless: veins alternately pale and dark: veinlets narrowly bordered with blackish, but no other spots or blotches present. Legs long and slender, with minute, distant spinelets along the ridges of femora and tibiæ.

Length of body without cerci, 73 mm.

Length of head, 4 mm.; width, 2.5 mm.

Length of antennæ, 22 mm.

Length of pronotum, 3 mm.; width, 2 mm.

Length of mesonotum, 10 mm.; width, 1.5 mm.

Length of metanotum, 5 mm.; width, 2.3 mm.

Length of abdomen, 51 mm.; width, 1.3 mm.

Length of tegmina, 8 mm.; width, 3 mm.

Length of wing, 38 mm.; width, 16 mm.

Length of cerci, 5 mm.

Although agreeing in size and colour patterns of the wings with Westwood's fig. 1 of Plate xxxv. (Cat. Phasm., B.M.), the specimen differs much in the minuteness and paucity of the spinelets of the femora and tibiæ of the legs, etc. The ocelli appear also to be practically replaced by mere shallow depressions. There are no other specimens in the S.A. Museum collection resembling either of the above. There is in the collection a female from Lake Aroona (N.W. from Port Augusta), and also a nymph of one, which appear to belong to the described male in general aspect, contour, and colour of wings, etc. Both were collected in December, 1900, by Mr. A. Loveday, and are differing in being larger.

***Necrosia bella*, spec. nov.**

Male. Greenish to reddish-brown: very slender. Head above rounded, minutely and distantly tuberculate, occiput anteriorly with a deep oval impression, median line indistinct: sides flat. Antennæ not much longer than the anterior femora, finely and densely hairy. Pronotum narrower and much shorter than the head, with a slight longitudinal and a promiscuous transverse carina in the middle. Mesonotum scabrous, nearly twice as long as the two preceding together, and attenuated towards the middle from both ends. Metanotum stout and the widest part of the body. Abdomen slender, gradually attenuated towards and inclusive of seventh joint, remainder moderately tumid. Subgenital lamina half the length of joint, apex emarginate. Cerci short, ovate.

hairy: porrected. Legs simple, very slender, moderately long; femora, tibiæ, and first joint of tarsi minutely and very densely spinulate along all three ridges. Tegmina very small, apex rotundately sinuate, elevated knob dark brown, remainder pale brown. Wings narrow, apex almost subacute: veins and veinlets of costal area from brown at the base to greenish along costa, and whitish near margin: of the remainder from bright to faintly rosy; interspaces pale green near costa, remainder very faintly rosy, transparent.

Length of body, 52 mm.; width, from 1.2-3 mm

Length of head, 3.3 mm.

Length of antennæ, 19 mm.

Length of pronotum, 2 mm.

Length of mesonotum, 9 mm.

Length of metanotum, 3.7 mm.

Length of abdomen, 34 mm.

Length of cerci, 3 mm.

Length of tegmina, 2 mm.; width, 1.5 mm.

Length of wing, 28 mm.; width, 12 mm.

Length of ant. femora, 16 mm.

Length of ant. tibiæ, 15 mm.

Length of med. femora, 10 mm.

Length of med. tibiæ, 10 mm.

Length of post. femora, 14 mm.

Length of post. tibiæ, 15 mm.

Length of tarsi, 3-4 mm.

This species appears to be nearest in affinity to *N. annulipes*, Curtis, but is considerably smaller and more slender, the proportions of antennæ and wings, besides less conspicuous characters, appear also to be sufficiently different to entitle it to specific rank. It is the first of the genus which has reached me from any part of the State of South Australia.

***Bacillus peristhenellus*, spec. nov.**

Two males. Body pale ochreous to dull blackish-brown, filiform, thorax carinated. Head pale dull ochreous, with two interrupted black vittæ behind the eyes, an ovate, longitudinal impression anteriorly, on either side of which a fine distinct ridge, hind margin crenate. Eyes yellowish-grey. Antennæ as long or longer as anterior femora, first joint long, flat, next two very short and thick, remainder shorter than first, subequal, filiform. Pronotum rough, dull, same colour as head, wider behind, anterior margin subcrenate, forming a distinct ridge, median carina very fine, marginal ridges distinct, intra-marginal carina rather broad. Mesonotum with subparallel sides, raised median and submarginal ridges, dark brown. Metanotum similar, ridges much more distinct,

both meso- and metanotum very minutely papillose between the raised lines, and of the same width. Abdomen very slender, apparently flat underneath, brown in the dried specimens, tapering towards apex. Legs triquetrous, with one or two carina on each face, unarmed. Supra-anal lamina very short, triangular. Cerci not exceeding apex.

Length of body, 35 mm. ; width, 1.1-1.3 mm.

Length of head, 1.6 mm.

Length of pronotum, 1.4 mm.

Length of mesonotum, 9.5 mm.

Length of metanotum, 6.5 mm.

Length of abdomen, 16 mm.

Length of ant. femora, 11 mm.

Length of ant. tibiæ, 11 mm.

Length of med. femora, 8 mm.

Length of med. tibiæ, 8 mm.

Length of post. femora, 10 mm.

Length of post. tibiæ, 7.5 mm.

There are two specimens in the collection, one a mature one apparently, the other immature and much smaller. Although much smaller, they appear to be best comparable with *B. Peristhenes*, Westwood, in general type of form, and to this the trivial name given refers. There are also two other immature specimens, too defective for classification.
